OIPE

RAW SEQUENCE LISTING   DATE: 05/02/2001
PATENT APPLICATION: US/09/835,684   TIME: 12:12:30

Input Set : A:\E72011.app
Output Set: N:\CRF3\05022001\I835684.raw

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#2.

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 3 <110> APPLICANT: Wei, Zhong-Min
 4         Qiu, Dewen
 5         Remick, Dean
 7 <120> TITLE OF INVENTION: TREATMENT OF FRUITS OR VEGETABLES WITH HYPERSENSITIVE
 8         RESPONSE ELICITOR TO CONTROL POSTHARVEST DISEASE OR
 9         DESICCATION
11 <130> FILE REFERENCE: 21829/71
13 <140> CURRENT APPLICATION NUMBER: US/09/835,684
14 <141> CURRENT FILING DATE: 2001-04-16
16 <150> PRIOR APPLICATION NUMBER: 60/198,359
17 <151> PRIOR FILING DATE: 2000-04-19
19 <160> NUMBER OF SEQ ID NOS: 12
21 <170> SOFTWARE: PatentIn Ver. 2.1
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24 <211> LENGTH: 338
25 <212> TYPE: PRT
26 <213> ORGANISM: Erwinia chrysanthemi
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33              20                  25                  30
35 Leu Gly Ser Ser Val Asp Lys Leu Ser Ser Thr Ile Asp Lys Leu Thr
36          35                  40                  45
38 Ser Ala Leu Thr Ser Met Met Phe Gly Gly Ala Leu Ala Gln Gly Leu
39      50                  55                  60
41 Gly Ala Ser Ser Lys Gly Leu Gly Met Ser Asn Gln Leu Gly Gln Ser
42  65                  70                  75                  80
44 Phe Gly Asn Gly Ala Gln Gly Ala Ser Asn Leu Leu Ser Val Pro Lys
45              85                  90                  95
47 Ser Gly Gly Asp Ala Leu Ser Lys Met Phe Asp Lys Ala Leu Asp Asp
48              100                 105                 110
50 Leu Leu Gly His Asp Thr Val Thr Lys Leu Thr Asn Gln Ser Asn Gln
51          115                 120                 125
53 Leu Ala Asn Ser Met Leu Asn Ala Ser Gln Met Thr Gln Gly Asn Met
54      130                 135                 140
56 Asn Ala Phe Gly Ser Gly Val Asn Asn Ala Leu Ser Ser Ile Leu Gly
57 145                 150                 155                 160
59 Asn Gly Leu Gly Gln Ser Met Ser Gly Phe Ser Gln Pro Ser Leu Gly
60              165                 170                 175
62 Ala Gly Gly Leu Gln Gly Leu Ser Gly Ala Gly Ala Phe Asn Gln Leu
63              180                 185                 190
65 Gly Asn Ala Ile Gly Met Gly Val Gly Gln Asn Ala Ala Leu Ser Ala
66          195                 200                 205
68 Leu Ser Asn Val Ser Thr His Val Asp Gly Asn Asn Arg His Phe Val
69      210                 215                 220
71 Asp Lys Glu Asp Arg Gly Met Ala Lys Glu Ile Gly Gln Phe Met Asp
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72 225                    230              235                240
74 Gln Tyr Pro Glu Ile Phe Gly Lys Pro Glu Tyr Gln Lys Asp Gly Trp
75               245              250              255
77 Ser Ser Pro Lys Thr Asp Asp Lys Ser Trp Ala Lys Ala Leu Ser Lys
78               260              265              270
80 Pro Asp Asp Asp Gly Met Thr Gly Ala Ser Met Asp Lys Phe Arg Gln
81           275              280              285
83 Ala Met Gly Met Ile Lys Ser Ala Val Ala Gly Asp Thr Gly Asn Thr
84       290              295              300
86 Asn Leu Asn Leu Arg Gly Ala Gly Gly Ala Ser Leu Gly Ile Asp Ala
87 305              310              315              320
89 Ala Val Val Gly Asp Lys Ile Ala Asn Met Ser Leu Gly Lys Leu Ala
90               325              330              335
92 Asn Ala
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98 <212> TYPE: DNA
99 <213> ORGANISM: Erwinia chrysanthemi
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104 gatctggtat ttcagtttgg ggacaccggg cgtgaactca tgatgcagat tcagccgggg 180
105 cagcaatatc ccggcatgtt gcgcacgctg ctcgctcgtc gttatcagca ggcggcagag 240
106 tgcgatggct gccatctgtg cctgaacggc agcgatgtat tgatcctctg gtggccgctg 300
107 ccgtcggatc ccggcagtta tccgcaggtg atcgaacgtt tgtttgaact ggcgggaatg 360
108 acgttgccgt cgctatccat agcaccgacg gcgcgtccgc agacagggaa cggacgcgcc 420
109 cgatcattaa gataaaggcg gctttttta ttgcaaaacg gtaacggtga ggaaccgttt 480
110 caccgtcggc gtcactcagt aacaagtatc catcatgatg cctacatcgg gatcggcgtg 540
111 ggcatccgtt gcagatactt ttgcgaacac ctgacatgaa tgaggaaacg aaattatgca 600
112 aattacgatc aaagcgcaca tcggcggtga tttgggcgtc tccggtctgg ggctgggtgc 660
113 tcagggactg aaaggactga attccgcggc ttcatcgctg ggttccagcg tggataaact 720
114 gagcagcacc atcgataagt tgacctccgc gctgacttcg atgatgtttg gcggcgcgct 780
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116 tttcggcaat ggcgcgcagg gtgcgagcaa cctgctatcc gtaccgaaat ccggcggcga 900
117 tgcgttgtca aaaatgtttg ataaagcgct ggacgatctg ctgggtcatg acaccgtgac 960
118 caagctgact aaccagagca accaactggc taattcaatg ctgaacgcca gccagatgac 1020
119 ccagggtaat atgaatgcgt tcggcagcgg tgtgaacaac gcactgtcgt ccattctcgg 1080
120 caacggtctc ggccagtcga tgagtggctt ctctcagcct tctctggggg caggcggctt 1140
121 gcagggcctg agcggcgcgg gtgcattcaa ccagttgggt aatgccatcg gcatgggcgt 1200
122 ggggcagaat gctgcgctga gtgcgttgag taacgtcagc acccacgtag acggtaacaa 1260
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126 cgccagcatg gacaaattcc gtcaggcgat gggtatgatc aaaagcgcgg tggcgggtga 1500
127 taccggcaat accaacctga acctgcgtgg cgcgggcggt gcatcgctgg gtatcgatgc 1560
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130 ttattatgcg gtttatgcgg ttacctggac cggttaatca tcgtcatcga tctggtacaa 1740
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132 gtcgctcaga ttgcgcggct gatggggaac gccgggtgga atatagagaa actcgccggc 1860
133 cagatggaga cacgtctgcg ataaatctgt gccgtaacgt gtttctatcc gccccttttag 1920
134 cagatagatt gcggtttcgt aatcaacatg gtaatgcggt tccgcctgtg cgccggccgg 1980
135 gatcaccaca atattcatag aaagctgtct tgcacctacc gtatcgcggg agataccgac 2040
136 aaaatagggc agttttttgcg tggtatccgt ggggtgttcc ggcctgacaa tcttgagttg 2100
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141 <211> LENGTH: 403
142 <212> TYPE: PRT
143 <213> ORGANISM: Erwinia amylovora
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149 Ile Gly Gly Ala Gly Gly Asn Asn Gly Leu Leu Gly Thr Ser Arg Gln
150             20                  25                  30
152 Asn Ala Gly Leu Gly Gly Asn Ser Ala Leu Gly Leu Gly Gly Gly Asn
153         35                  40                  45
155 Gln Asn Asp Thr Val Asn Gln Leu Ala Gly Leu Leu Thr Gly Met Met
156     50                  55                  60
158 Met Met Met Ser Met Met Gly Gly Gly Gly Leu Met Gly Gly Gly Leu
159 65                  70                  75                  80
161 Gly Gly Gly Leu Gly Asn Gly Leu Gly Gly Ser Gly Gly Leu Gly Glu
162             85                  90                  95
164 Gly Leu Ser Asn Ala Leu Asn Asp Met Leu Gly Gly Ser Leu Asn Thr
165             100                 105                 110
167 Leu Gly Ser Lys Gly Gly Asn Asn Thr Thr Ser Thr Thr Asn Ser Pro
168         115                 120                 125
170 Leu Asp Gln Ala Leu Gly Ile Asn Ser Thr Ser Gln Asn Asp Asp Ser
171     130                 135                 140
173 Thr Ser Gly Thr Asp Ser Thr Ser Asp Ser Ser Asp Pro Met Gln Gln
174 145                 150                 155                 160
176 Leu Leu Lys Met Phe Ser Glu Ile Met Gln Ser Leu Phe Gly Asp Gly
177             165                 170                 175
179 Gln Asp Gly Thr Gln Gly Ser Ser Ser Gly Gly Lys Gln Pro Thr Glu
180             180                 185                 190
182 Gly Glu Gln Asn Ala Tyr Lys Lys Gly Val Thr Asp Ala Leu Ser Gly
183         195                 200                 205
185 Leu Met Gly Asn Gly Leu Ser Gln Leu Leu Gly Asn Gly Gly Leu Gly
186     210                 215                 220
188 Gly Gly Gln Gly Gly Asn Ala Gly Thr Gly Leu Asp Gly Ser Ser Leu
189 225                 230                 235                 240
191 Gly Gly Lys Gly Leu Gln Asn Leu Ser Gly Pro Val Asp Tyr Gln Gln
192             245                 250                 255
194 Leu Gly Asn Ala Val Gly Thr Gly Ile Gly Met Lys Ala Gly Ile Gln
195             260                 265                 270
197 Ala Leu Asn Asp Ile Gly Thr His Arg His Ser Ser Thr Arg Ser Phe
198         275                 280                 285
200 Val Asn Lys Gly Asp Arg Ala Met Ala Lys Glu Ile Gly Gln Phe Met
201     290                 295                 300
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203 Asp Gln Tyr Pro Glu Val Phe Gly Lys Pro Gln Tyr Gln Lys Gly Pro
204 305             310             315             320
206 Gly Gln Glu Val Lys Thr Asp Asp Lys Ser Trp Ala Lys Ala Leu Ser
207             325             330             335
209 Lys Pro Asp Asp Asp Gly Met Thr Pro Ala Ser Met Glu Gln Phe Asn
210             340             345             350
212 Lys Ala Lys Gly Met Ile Lys Arg Pro Met Ala Gly Asp Thr Gly Asn
213         355             360             365
215 Gly Asn Leu Gln Ala Arg Gly Ala Gly Gly Ser Ser Leu Gly Ile Asp
216     370             375             380
218 Ala Met Met Ala Gly Asp Ala Ile Asn Asn Met Ala Leu Gly Lys Leu
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221 Gly Ala Ala
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226 <211> LENGTH: 1288
227 <212> TYPE: DNA
228 <213> ORGANISM: Erwinia amylovora
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233 atcggcggtg cgggcggaaa taacgggttg ctgggtacca gtcgccagaa tgctgggttg 180
234 ggtggcaatt ctgcactggg gctgggcggc ggtaatcaaa atgataccgt caatcagctg 240
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237 ggactgtcga acgcgctgaa cgatatgtta ggcggttcgc tgaacacgct gggctcgaaa 420
238 ggcggcaaca ataccacttc aacaacaaat tccccgctgg accaggcgct gggtattaac 480
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240 ccgatgcagc agctgctgaa gatgttcagc gagataatgc aaagcctgtt ggtgatggg 600
241 caagatggca cccagggcag ttcctctggg ggcaagcagc cgaccgaagg cgagcagaac 660
242 gcctataaaa aaggagtcac tgatgcgctg tcgggcctga tgggtaatgg tctgagccag 720
243 ctccttggca acggggggact gggaggtggt cagggcggta atgctggcac gggtcttgac 780
244 ggttcgtcgc tgggcggcaa agggctgcaa aacctgagcg ggccggtgga ctaccagcag 840
245 ttaggtaacg ccgtgggtac cggtatcggt atgaaagcgg gcattcaggc gctgaatgat 900
246 atcggtacgc acaggcacag ttcaacccgt tctttcgtca ataaaggcga tcgggcgatg 960
247 gcgaaggaaa tcggtcagtt catggaccag tatcctgagg tgtttggcaa gccgcagtac 1020
248 cagaaaggcc cgggtcagga ggtgaaaacc gatgacaaat catgggcaaa agcactgagc 1080
249 aagccagatg acgacggaat gacaccagcc agtatggagc agttcaacaa agccaagggc 1140
250 atgatcaaaa ggcccatggc gggtgatacc ggcaacggca acctgcaggc acgcggtgcc 1200
251 ggtggttctt cgctgggtat tgatgccatg atggccggtg atgccattaa caatatggca 1260
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256 <211> LENGTH: 447
257 <212> TYPE: PRT
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264 Phe Gln Ser Gly Gly Asp Asn Gly Leu Gly Gly His Asn Ala Asn Ser
265             20              25              30
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PATENT APPLICATION: US/09/835,684   TIME: 12:12:30

Input Set : A:\E72011.app
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268         35              40              45
270 Gln Leu Leu Ala Glu Leu Leu Lys Ser Leu Leu Ser Pro Gln Ser Gly
271     50              55              60
273 Asn Ala Ala Thr Gly Ala Gly Gly Asn Asp Gln Thr Thr Gly Val Gly
274 65              70              75              80
276 Asn Ala Gly Gly Leu Asn Gly Arg Lys Gly Thr Ala Gly Thr Thr Pro
277             85              90              95
279 Gln Ser Asp Ser Gln Asn Met Leu Ser Glu Met Gly Asn Asn Gly Leu
280         100             105             110
282 Asp Gln Ala Ile Thr Pro Asp Gly Gln Gly Gly Gly Gln Ile Gly Asp
283     115             120             125
285 Asn Pro Leu Leu Lys Ala Met Leu Lys Leu Ile Ala Arg Met Met Asp
286     130             135             140
288 Gly Gln Ser Asp Gln Phe Gly Gln Pro Gly Thr Gly Asn Asn Ser Ala
289 145             150             155             160
291 Ser Ser Gly Thr Ser Ser Ser Gly Gly Ser Pro Phe Asn Asp Leu Ser
292             165             170             175
294 Gly Gly Lys Ala Pro Ser Gly Asn Ser Pro Ser Gly Asn Tyr Ser Pro
295             180             185             190
297 Val Ser Thr Phe Ser Pro Pro Ser Thr Pro Thr Ser Pro Thr Ser Pro
298         195             200             205
300 Leu Asp Phe Pro Ser Ser Pro Thr Lys Ala Ala Gly Gly Ser Thr Pro
301     210             215             220
303 Val Thr Asp His Pro Asp Pro Val Gly Ser Ala Gly Ile Gly Ala Gly
304 225             230             235             240
306 Asn Ser Val Ala Phe Thr Ser Ala Gly Ala Asn Gln Thr Val Leu His
307             245             250             255
309 Asp Thr Ile Thr Val Lys Ala Gly Gln Val Phe Asp Gly Lys Gly Gln
310         260             265             270
312 Thr Phe Thr Ala Gly Ser Glu Leu Gly Asp Gly Gly Gln Ser Glu Asn
313         275             280             285
315 Gln Lys Pro Leu Phe Ile Leu Glu Asp Gly Ala Ser Leu Lys Asn Val
316     290             295             300
318 Thr Met Gly Asp Asp Gly Ala Asp Gly Ile His Leu Tyr Gly Asp Ala
319 305             310             315             320
321 Lys Ile Asp Asn Leu His Val Thr Asn Val Gly Glu Asp Ala Ile Thr
322             325             330             335
324 Val Lys Pro Asn Ser Ala Gly Lys Lys Ser His Val Glu Ile Thr Asn
325             340             345             350
327 Ser Ser Phe Glu His Ala Ser Asp Lys Ile Leu Gln Leu Asn Ala Asp
328             355             360             365
330 Thr Asn Leu Ser Val Asp Asn Val Lys Ala Lys Asp Phe Gly Thr Phe
331     370             375             380
333 Val Arg Thr Asn Gly Gly Gln Gln Gly Asn Trp Asp Leu Asn Leu Ser
334 385             390             395             400
336 His Ile Ser Ala Glu Asp Gly Lys Phe Ser Phe Val Lys Ser Asp Ser
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339 Glu Gly Leu Asn Val Asn Thr Ser Asp Ile Ser Leu Gly Asp Val Glu
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VERIFICATION SUMMARY   DATE: 05/02/2001
PATENT APPLICATION: **US/09/835,684**   TIME: 12:12:31

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Output Set: **N:\CRF3\05022001\I835684.raw**

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L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date